The Hive Problem—Best Size.
R. C. AIKIN.

Index to Volume XLII.

AMERICAN BEE JOURNAL

GEORGE W. YORK, Editor.

CHICAGO, ILL., DEC. 25, 1902.

FORTY-SECOND YEAR
No. 52.

WEEKLY

APIARY OF E. H. STEWART, OF ONTARIO, CANADA.

THE AMERICAN BEE JOURNAL

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SPECIAL CORRESPONDENTS—G. M. Doolittle, Prof. A. J. Cook, C. P. Dadant, R. C. Aikin, F. Greiner, A. Getaz, and others.

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To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Forty Years Among the Bees

By DR. C. C. MILLER.

DR. C. C. MILLER.

The above is the title, and name of the author, of a new bee-book which will be ready some time in January, 1903, as it is now in the hands of the printers. It is a book that every bee-keeper in the world that can read English will want to own and read. It will contain over 300 pages, be bound in handsome cloth, printed on good book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. The book will show in detail how Dr. Miller does things with bees.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, which finally tells how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called, "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters.

How to Get a copy of Dr. Miller's "Forty Years Among the Bees."

The price of this new book is $1.00, postpaid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer. Better send in the new subscriptions before Jan. 1, so they can begin with the new year. Or, if sent at once, we will throw in the rest of this year's numbers of the Bee Journal free to the new subscribers.

GEORGE W. YORK & CO.,

144 & 146 East Erie Street, CHICAGO, ILL.

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

42d YEAR. CHICAGO, ILL., DEC. 25, 1902. No. 52.

Editorial Comments.

A Merry Christmas we wish to all the readers of the American Bee Journal, and many of them ere they shall be called to leave this world.

The Index to Volume XLII appear in this number. We trust it may prove of value to all who have preserved each week's copy as it has come.

By the way, if any subscriber finds he has failed to receive any copy that is due him, we will be glad to send it again if we are asked for it, and if we still have any of them on hand. Better ask at once if any missing copies are wanted.

Forced Swarms—Questions About Them.—There seems quite a general agreement that in at least most localities the anticipation of natural by forced swarms is a boon, but there is not entire agreement as to the minutiæ. Indeed, it is quite possible that there can be no general agreement, because difference of localities, seasons, or conditions make an entire agreement as to the details of management impossible. Among the questions to be settled are the following:

Shall forced swarms be made before or after queen-cells are started? Shall a frame of brood be left with the forced swarm, or shall it be left with neither brood nor honey? If brood is left, how long shall it be left, or shall it be left permanently? What is best to give the forced swarm, drawn combs, frames filled with foundation, large starters, small starters, or what? Is there more or less likelihood of forced than of natural swarms deserting? And that may be only a small part of the questions arising in actual practice, and to which answers will be expected from those who have had experience.

Bottled Honey Growing in Popularity.—Editor Root has the following paragraph in a recent number of Gleanings in Bee-Culture, on the growing subject of putting up and selling honey in bottles:

"If you, my dear reader, happen to live in a locality where there is no bottled honey except that which comes from some packing-house, unknown or of doubtful reputation, just try putting out some neat bottled goods of your own, bearing your own label, and see what a nice trade you will have. Your own good reputation, with a personal explanation from yourself, will make the goods move off like hot-cakes. But you must make one trip around among the consumers, explaining that it is your honey; how you put it up, and that you guarantee it to be absolutely pure."

But we do not advise putting up honey in glass bottles or jars to be sold by the bee-keeper direct to the consumer. Such should only be sold to consumers through the grocery trade. There is many a town or small city where a live, wide-awake bee-keeper could do well if he would keep the grocery trade well supplied with pure honey in glass jars holding ¼ or one pound each. He could first dispose of his own crop of honey, and then afterwards buy honey, so long as he got it from a dealer who would guarantee its purity.

But some one may say, "Honey is too high in price now. I can't afford to buy and sell again." And yet you were the chap that was kicking a while ago, because honey was selling too cheap. Yes, and you wanted to organize a honey exchange so as to boost up the price of honey! Oh, you had your own crop of honey to sell then, did you? Ah, we see.

But when honey, like any thing else, is higher in price in the market, you must ask *more* when you sell it. Of course, some people will object to paying a cent or two more on a pound, but such are very few indeed. A few words of explanation usually satisfies them, if you are a truthful and honest man. If you are any other kind, you hadn't better try to sell honey, or anything else, for that matter.

Amending the National Constitution—Mr. Geo. W. Brodbeck, one of the leading bee-keepers of California, wrote us as follows, Dec. 8:

The American Bee Journal of Dec. 4th is just at hand. I note in the report of the Denver Convention several propositions to amend the Constitution of the National Bee-Keepers' Association. I, too, fully recognize the existing defects, but until the Constitution is amended so as to permit time for full and free discussion, pro and con, in our bee-papers, I desire to enter my protest against any action by vote presentation without due notice. We who reside in the North, South, East and West, and are not so fortunate as to be present at these annual sessions, desire to be heard. I believe in the recognition of the rights of every individual member present or absent, and no other method will ever incite a hearty co-operation of the membership at large. I firmly believe there are great possibilities in store for this organization in its proper and consistent management.

Los Angeles Co., Calif. GEO. W. BRODBECK.

There is considerable in what Mr. Brodbeck says, but it is too late now to help any this time, we fear. Still, the proposed changes are not serious, and if adopted the Association could still go forward and be as successful as it is now. We are willing to trust to the majority in this as well as in other matters affecting the welfare of the Association.

Benefits of Co-Operation.—In discussing this matter in the Bee-Keepers' Review, E. A. Daggitt claims that the farmers produce wealth but fail to get their proper share of it, the lion's share being absorbed by those who distribute the product of the farmer, while he gets only what others are willing he should have. He gives the following striking illustration:

In this part of the New Jersey peach section we have raised and shipped millions of baskets of peaches, yet most of the growers have been left poor. Why is this? Let us see. Baskets have cost from 2½ cts. to 4½ cts. each. When the most peaches were shipped the prices ranged from 3 to 3½ cts. Freight was 9 cts. a basket; cartage 4 cts.; commis-

sion 10 percent. On a 50-cent basket the cost would be from 21 cts. to 21½ cts. per basket, about double what it should have been, leaving to the growers 28½ to 29 cts. per basket —less than cost of production.

The larger part of the peaches have been sold for less than 50 cts. per basket—many away below that price. In some instances a bill of costs has been rendered. We have had returns of 8 cts. per basket, net. When peaches have sold at wholesale for 25 and 30 cts. per basket, I have known them to retail at 10 to 15 cts. per quart. One season when we were getting from about 50 to 75 cts. per basket for the best grade of peaches, a friend told me that he had seen good peaches offered for sale on Staten Island for $3.00 per basket. Another season there was only a moderate crop of peaches here, and the crop was a small one generally throughout the country, yet, when the "run" of the Reeve's favorite variety came, there was a "glut;" and when the "run" of late Crawfords came on there was a worse "glut." So the manipulators said, but, in reality, there was no glut at all. The manipulators of prices were only fixing things to suit themselves, but to the injury of the growers.

I then saw what was the trouble, the great trouble, with farming. If there is manipulation of prices with one product, then there must be the same with all products, if it is worth while. It is just the same with honey, without a question.

The Weekly Budget.

MR. MORLEY PETTIT, of Ontario, Canada, was one of the very prominent young men at the recent Chicago-Northwestern convention. His impression of that meeting is expressed as follows in a letter we received from him Dec. 12:

DEAR MR. YORK:—The convention fully repaid me for coming, although it *was* 400 miles. Not only were the discussions pleasant and profitable, but the meeting with men whom I have known for years through bee-literature added materially to my enjoyment of the convention. It is so much better to know flesh-and-blood men than paper men. While you are shaking hands your little differences of opinion fade away into the vague regions of "locality."

Fraternally yours, MORLEY PETTIT.

TO FOREIGN SUBSCRIBERS.—Occasionally it seems necessary for us to say, for the information of foreign bee-keepers, that none of our special offers found anywhere apply to them. They apply only where domestic postage rates are in force, Neither do we export queen-bees. But we mail bee-books at regular rates where the book postage is the same as in the United States. Whenever we get a foreign remittance on a combination offer of the Bee Journal and something else, we simply apply it all on the subscription to the Bee Journal, as in that way the subscriber gets full value for his money.

Please remember, foreign readers, that our special clubbing or combination offers do not apply to you. They could not, as all know that there is extra postage to those countries, so we intend our special offers for those countries only to which our pound postage rate applies.

DR. MILLER OF ALL STATES.—We have received this from Dr. C. C. Miller, of Marengo, McHenry Co., *Illinois*.

MR. EDITOR:—On page 788, I see my name mentioned among those present from other States at the Chicago convention. This is to give you notice that I still reside in McHenry county, and that said county has not yet been moved out of the State of Illinois—indeed, it has not yet been jacked up on wheels for that purpose.

C. C. MILLER.

When first reading the above, we wondered how we were going to get out of the dilemma we had gotten ourselves and also the good Doctor into. An easy exit immediately suggested itself to us. Doesn't Dr. Miller belong to *all* the States? Of course he does. He lives (apiculturally and "bee-literaturally") all over the United States as well as in the rest of the world. We know he eats and sleeps in Illinois, but that is a very small part of his real life.

Now, haven't *we* gotten out of the difficulty fairly well? Of course *Dr. Miller* didn't have to get out of any scrape. Physically he's still in McHenry County, Illinois. In every other way he's everywhere where bee-keeping and bee-keepers exist. And when his new book—"Forty Years Among the Bees"—is out, he will very soon thereafter be more scattered than ever, for every(bee)body will want to read about him and his life work.

LATER.—A day or two after writing the foregoing we received this from Mr. Abbott.

DEAR MR. YORK:—I notice your editorial about those present at the Northwestern from other States, among them Dr. Miller is named. What county does he hail from, anyway? I guess you are correct, he is big enough to belong to the United States, and good enough for any State.

Fraternally yours, E. T. ABBOTT.

It will be noticed this agrees with the explanation we had already written. So it might have been a bigger mistake.

TEXAS HONEY.—Louis H. Scholl says in the Progressive Bee-Keeper, that southwest Texas alone will use, during the coming season, not less than 20 car-loads of tin cans to be filled with honey for strictly family use.

MR. E. J. ROOT, 90 West Broadway, New York, N. Y., is a correspondent of the London Grocer and other journals. Well, what of it? Who cares if he is? There's this of it: He is a brother to W. P. Root, the "Stenog" of Gleanings in Bee-Culture, has a warm side toward bee-keepers, and is in a position to get before a large class of readers, whom the bee-papers never reach, information about honey that may do us a whole lot of good. Witness the following clipping from the London Grocer:

"Honey is a valuable and wholesome article of food, which is not so much seen on our breakfast tables—and on our readers' counters—as it ought to be; but it will probably be taken up commercially one of these days. A Colonial Office report on Malta, mentions that honey is one of the products of that British island. In the northwest portion, overlying the upper coralline limestone, are uncultivated lands suitable for the growth of the wild thyme. A firm at Birchircara cultivate the bee on a rational and commercial basis, and the honey produced is of the first quality. The output could be increased were it not for the destruction of the thyme, which is, when dry, collected for fuel."

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Convention Proceedings.

THE DENVER CONVENTION.

Report of the Proceedings of the 33d Annual Convention of the National Bee-Keepers' Association, held in Denver, Col., on Wednesday, Thursday and Friday, Sept. 3, 4 and 5, 1902.

(Continued from page 807.)

REPORT ON THE PEAR-BLIGHT QUESTION.

M. A. Gill, on behalf of the committee, presented the report on the pear-blight question, as follows:

WHEREAS, The National Bee-Keepers' Association assembled in Denver, Sept. 5, 1902; and

WHEREAS, The Central California Bee-Keepers' Association has submitted for our consideration a preamble and resolution embodying the "pear-blight-bee" question, asking for advice and protection, providing there is further trouble. Therefore, be it

Resolved, That we grant unto them the request embodied in their resolution heretofore submitted.

M. A. GILL,
F. E. BROWN,
FRANK BENTON. } *Com.*

R. H. Rhodes moved, and it was seconded by J. P. Ivy, that the report be accepted. The chairman put the motion, which, on a vote having been taken, was declared carried.

F. E. Brown—In accepting the report of the committee that does not adopt the resolution submitted by the committee, does it?

Vice-Pres. Harris—No, sir. What is your pleasure with regard to adopting the report of the committee?

Mr. Brown—I move that we adopt the report of the committee.

J. B. Adams—I second the motion.

The chairman put the motion, which, on a vote having been taken, was declared carried.

REMOVING SUPERS OF HONEY.

QUES.—"Will Mr. Coggshall show or tell us how to kick off supers?"

Mr. Coggshall—Always get the bees subdued before you do any kicking.

Dr. Mason—How do you subdue them?

Mr. Coggshall—With smoke. The jar is no more when you kick it off than when you pry it off with a chisel.

Dr. Mason—Do you kick it off with your toe or heel?

Mr. Coggshall—I do it with my heel, usually. If it is necessary, use your toe.

CONSIGNING HONEY TO COMMISSION MERCHANTS.

QUES.—"Is it advisable for the bee-keeper to consign his honey to the comission merchant?"

Mr. Hershiser—On that question I desire to read a little correspondence, and I will be just as brief as possible. [Mr. Hershiser read correspondence passing between a shipper and commission merchants by the name of Batterson & Co.]

Batterson, the commission merchant, in this case knew just when the honey referred to in this correspondence would arrive; it was shipped immediately after the shipper received instructions. He offered to sell his honey so that it would net 4½ cents per pound; the shipper afterwards let him down to 4 cents net. He promised the shipper he would not sell it for less than his limit, unless he got the advice and consent of the shipper. It was necessary for the shipper afterwards to place the matter in the hands of his attorney, I being his attorney. I took the honey out of the hands of the commission merchant, and ordered that no more of it be sold. Then I asked for a statement of the honey that had been sold, and he rendered such statement showing that out of 204 cases there were 203 to be delivered to me, he having sold one case.

It was not very long after that till I found out, as a matter of fact, that a ton of it had been placed in the hands of another commission merchant in Buffalo, and that part of it had been sent to Cleveland to some other alleged good commission men who knew all about honey! These men had said it was adulterated; and when I got his statement it amounted to this, among other things: The freight came tn $305.25; then a matter of car service, $5; cartage, $5.40; storage, 12.24; insurance, $5; and interest, $4.25. In the first instance the cartage was about $10.40, but I showed him that the prevailing price for cartage was only about half that, so he cut that about in two. In the first instance the storage was $18.24, and I cut that down to $12.24; I could get no reduction on the item of insurance; and I got 80 cents off the item of interest, $4.25, on the ground that part of the honey he had sold to another man, and there was a little rebate on that amounting to 86 cents. He suggested that was a very small matter, and I told him it was just as small for him to take it as it was for me to take it, and he suggested we cut it in two. With reference to the item of car service, I contended it was owing to his negligence the car was not unloaded, and by inquiry at the freight-office I found he had increased that by one dollar, one dollar of the car service having been charged up on a carload of potatoes.

In order to get possession of this honey, it was either necessary to settle with him on these expense charges he had made, or else replevin the honey. To replevin it would have meant three bonds, and would require, besides that, bonds for security for cost on the ground that the plaintiff lived outside of the State. So it would have cost, perhaps, $150 or $200 in sheriff's fees, and fees for the bonding companies, and so on, before he could have got in possession of this honey, so it was necessary for me to settle and let him bleed this man out of $60 in addition to his attorney's fees.

After this I demanded that he make this amount good on this car-lot of honey on the price he had agreed to net him, and if he didn't do it that I, as an officer of this Association, would deem it my duty to lay the matter before them, which I am now doing. So if any of you want to ship honey to any like Batterson, and you lose your honey, don't blame the Association or anybody that has given you this information. I don't desire any practice of this kind; I am an attorney, and anxious to earn fees, but I don't want to earn fees of this kind; I would rather earn them in some manner that is not bleeding people out of their money.

I think it would be a good thing for this Association to take up matters of this kind so that commission merchants in various parts of the country will realize that it does not make any difference whether the shipper resides within three or three thousand miles of this place; that he has no more protection in cheating a man out of his money, or honey, if he lives three thousand miles away than he has if he lives three miles away.

I simply give you these facts, and you may do with them as you please.

Vice-Pres. Harris—I will take up the question of the committee on the proper marketing of honey, to look after the common interests of the whole country. I will name on that committee, Messrs. F. Rauchfuss, of Colorado; F. E. Brown, of California; Dr. A. B. Mason, of Ohio; W. Z. Hutchinson, of Michigan; and O. L. Hershiser, of New York.

Vice-Pres. Harris then left the chair, and Pres. Hutchinson resumed it.

EFFECT OF COMB ON THE COLOR OF EXTRACTED HONEY.

QUES.—"Does the color of the comb, from which honey is extracted, have any effect on the color of honey?"

Dr. Miller—I should like to hear from any who have had personal experience that would help to decide positively that question one way or the other. I may say in general terms that it has been claimed that the old combs did have that effect upon the color of the honey, and some, who say they have produced extra-white honey, say they have done it by taking it from virgin combs. Mrs. Harrison, for one, claims that there is some reason for believing that comb of a very dark color should have an effect upon the honey for this reason: I think nearly all of you know that when you have taken some very old, black comb that has been filled with water, no matter how, if that has stood for some time, and you take it and shake out the water, it looks almost as black as ink. I think I can appeal to the majority of you as to that. If water will take the black color out of the comb, then the water which is in honey one might naturally suppose would also take the color out. I think the argument is plenty strong in that direction, and yet if any one has had positive proof about it, it will be worth more than theory.

Mr. Dadant—On this question there are two points to be considered, if you wish to know whether it has a great or small effect on honey. There is the possibility that the color of the comb has a very slight effect on the color of honey, but if any one says that the color of the comb has a great effect on the color of honey, I will dissent altogether. We used to save all our old comb, all the broken combs, to put into the frame; we used to import in small boxes combs 6x4; we thought so much of the comb that we saved it and put them one above the other, 16 pieces for one frame; we used those for extracting, and we have produced as white honey as anybody else. There might be a very slight difference in the shade, we do not know whether that is due to the comb or due to other causes, but we do know we can produce a very white honey in very dark combs. There is one color which gets into the comb that I think has more influence than the dark color, and that is the yellow color of the blossoms. Sometimes the combs are turned yellow in a very few days; I believe that color can get into the honey, but usually the honey we harvest at that time is of the same shade, so that it can have no influence over it.

J. A. Huebner—In regard to this question of honey-coloring, I want to say that I had an experience of that kind last year. Last fall I extracted some honey out of dark comb, and it was almost water-white, and then two weeks later these combs were filled up again, and I was absent from home, and this honey was not extracted until the next May, 1902, and that honey which stood in the comb over winter got darker, which I have every reason to believe was color taken from the dark comb.

W. P. Collins—That honey which stood over might have been darker, and even the white honey might get dark.

Mr. Dadant—There is one thing I might state. If the dark comb is likely to give any color I think it will give it the first time. We have extracting-combs from which we have extracted every year for 30 years, and they are better to-day because they are heavier.

Dr. Mason—Dark combs?

Mr. Dadant—Certainly. Before foundation was invented we used to save the pieces of our combs and put them in the supers. Those dark combs, after you extract from them three or four times, do you hold they still color the honey? Suppose there is color the first time, it is not likely that the color will be dissolved in the first extracting, and that for 15 years they will be as good as new combs? It looks to me unreasonable to think we can make old combs white by having them color the honey. There may be a very slight difference, but you must be sure that that difference is not caused by some other things, such as you mentioned here when you get two bottles of honey side by side and say they are two grades of honey. Some of you, I understand, say when there is no water in the soil the honey is darker, although it is from the same blossom. Don't charge the dark comb with the coloring of the honey unless you are positive that that has done it. I believe you can only say it has done it in perhaps the first instance, that is, the time when it has just been used for brood, and afterwards used for honey, and then this color is likely to become loosened and absorbed by the honey.

Mr. Gill—In my judgment I am satisfied that the honey Mr. Huebner speaks of was darker when it was gathered than the other honey was.

Dr. Mason—I can understand this whole question. It all depends upon the locality. You have had that before you to-day. Now, then, you may argue all you have a mind to. You can see those two bottles now, the honey in one bottle is light honey, and that same honey was put in the same combs ten days before I came here and left till I came away, and that is the same honey, and those combs have been used for extracting for the last four years. It all depends upon locality, not on the combs.

J. A. Green—I would like to ask Dr. Mason how he is sure that is exactly the same honey in those two bottles?

Dr. Mason—I know in this way, because I took some of this honey and put into the dark combs myself just to test it, because this question has beeen asked so many times. That is the same honey, precisely; it was in there seven or eight days perhaps, and I took it out just for the purpose of bringing it here.

Mr. Green—Did you give it back to the bees after that?

Dr. Mason—No, sir; the bees had nothing to do with it since I got it, of course not.

Mr. Green—I ask that because it is so easy for the bee-keeper to be mistaken in that respect. The first honey that I extracted this year was very light in color, about a white, and a few days later, and from the same source, and from the same comb, much darker. Like Mr. Dadant, I have old combs.

Dr. Mason—The question is, Will the color of the comb make any difference in the color of the honey?

Mr. Green—I have a large number of old combs, and I agree with Mr. Dadant that for the first extracting there will be a slight tinge given to the honey, but after that there certainly can not be, or at least very little. I have these old combs, thousands of them, some of them 25 years in use; to all appearances they are just as black as ever, and I get just as light honey from those combs as from new combs.

J. B. Adams—One year I had a good chance to test that. I had white combs. I had read in the journals considerable about the combs coloring honey, but I didn't want the bees to be idle, so I used black combs, and I got just as white honey from those black combs as can be produced anywhere. It didn't make a particle of difference; there was no more shade to the honey than there was to any water-white honey.

R. D. Williams—I use in my upper stories half-drawn combs, and I have full sheets of foundation; the full sheets of foundation are white, while the others are very often very black, and I notice there is no difference at all in the honey.

Mr. Dadant—I was called upon to give an opinion on this subject, and I think it would be well for me to add that in regard to the color of honey we must never be too sure on that point. We have had honey from the same blossoms in three or four different yards, and there was so much difference in color that while we could sell the honey from one yard we could not from the other; the difference in shade was quite perceptible, so that the person buying would not accept the honey from one yard in place of that from another, and yet the blossoms were the same. What caused it, I am unable to tell. I believe if you can at any time get very white honey from very dark comb, that will settle the question. I, perhaps, have seen that, but I have not paid any particular attention to it.

W. L. Hawley—For the last eight years there is one thing that I have borne in mind. I have noticed one particular thing: Take a frame and put it into the super, leave that till the last, and throw that out while there is a light flow of white honey, and you will see a difference; but the next time you go around and perform the same operation you will see no difference whatever; from that time on, as long as you use those combs for extracting, there is no difference whatever between the old comb and the white comb; but the first time you remove it out from below, or use it for extracting, is where the difference comes, and that is the only time you can see any difference in the use of the comb.

Dr. Mason—This thing probably depends upon locality, for the gentleman is absolutely wrong so far as my locality is concerned. I tell you, the comb that colored this honey has been used for extracting purposes for five years, and has been extracted from a good many times, you can not be right. Locality makes a difference.

Mr. Green—Was there no brood reared in that comb during those five years?

Dr. Mason—No, sir.

Mr. Brown—Speaking about locality and color of honey, in receiving honey I received it from central California and different locations, and on the south is Tulare Lake; it is a shallow body of water, and the ground being sandy the water runs under it, and alfalfa is grown upon its borders, the roots run down directly into the water; the honey that is produced in that locality is darker; but a little further away where it is dryer the honey is whiter; when you come up to where it is very dry, and no moisture, our honey is white; and when you show me white alfalfa honey I will tell you the condition of the ground on which it is grown, every time; but whether that holds good with reference to other honey, I can't say.

(Continued next week.)

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Contributed Articles.

THE HIVE PROBLEM.

What Size is Best, Eight or Ten Frame?

BY R. C. AIKIN.

I KNOW this is an old and worn subject, but I do not consider it settled, by any means. This question, like very many others pertaining to the honey industry, is not thoroughly understood; we are constantly learning by experience and in other ways.

I will not say that any particular size of hive is what we need, but I want to tell some things I have found in my experience, and give the reader my conclusions. And, beginning right now, when the bees are starting into winter, let us trace them along through the year, and, as an illustration consider a colony that has been on 6 brood-combs through the summer. If run for comb honey, the probabilities are that there will be some pretty solid packing of the brood-combs with honey, but whether they are well filled or not depends on several conditions. Notice that I say it depends *on conditions*, and in discussing this question I will do it from the standpoint of the apiarist producing conditions, or meeting them so as to modify the effects following.

A colony on 6 combs through the summer, and for comb honey, if they had the 6 combs well filled with brood when the flow began, and if the flow came on abruptly and the weather hot or favorable to super-work, the nectar being plentiful and the colony strong enough to start work in the sections and keep it going, and *if* (note these ifs), the flow suddenly stopped, and if the queen was laying vigorously at the time and kept the combs full of brood and they were so when the flow stopped; and if that flow stopped near the end of summer when the season for breeding was about over, then you have a colony with many young bees and in prime shape for winter, so far as number and age go, but with not stores enough to last till spring, or, if they do last till spring, there will be a poor condition in the spring, if not actual starvation.

But (now don't laugh at the string of buts and ifs), if you will just put right on top of that strong colony at the close of the season, another 6 brood-combs *solid full of honey*, then you have a colony that is in almost ideal condition for winter; and not only for winter, but for building up nicely in the spring. Remember that we are discussing the hive question, and that it is understood that the stock and queen is O. K. A poor queen would be bad in the best hive.

A man ought always to be able to give a reason for the faith that is within him, so I would better tell you why I consider the colony just described as being in prime condition. They have plenty of bees of all ages. It is the commonest kind of knowledge to bee-men, that old bees would not live through the winter and into the spring when and until there is sufficient young bees hatching to take their places. And we all know that one bee, all by itself, can stand but little cold until chilled, and in like manner proportionately a small cluster will chill quicker than a large one; hence, to start the colony into winter with a big force of young, vigorous bees means that they can stand much cold, and when the time comes to begin breeding they can supply the necessary heat. We all know these things.

And we know that those bees will naturally cluster on the original empty combs—they will be practically empty by cold weather because the brood hatched out in meantime, and having the solid combs above them they will consume of it, following *up* as the honey is used, and when spring comes the colony is found in the *top* of the hive. All this time the stores have been closed to the bees—it was easy for them to feed, whether warm or cold.

There, I heard some one say that I must take away that lower hive of empty combs as soon as the bees are out of it, else they would waste a great lot of heat trying to keep it warm, using too much honey to get the heat, wearing out stores and bees both. Well, now, don't you worry one minute about that problem, it is not a fact at all. Don't you see that there is not one hive in 100 that fits the colony in the spring—no, not one in a thousand, except where the apiarist keeps contracting the hive as his colony grows smaller; every colony under normal conditions in cold climates becomes too shall for its hives in the early spring. If it is a fact that the hive is always larger than the colony in spring—and it is a fact—don't you see that all the talk about having a small hive so the bees can keep it warm is foolish?

Notice that I said this sample colony we are speaking of was on 6-frames to start with. They will not warm the entire hive, no colony outside in winter ever keeps its *hive* warmed. They do, however, if the cluster is large, keep themselves and the comb they cover, warm, and in a large measure keep the *upper* part of the hive somewhat warm, particularly right above the cluster. It is common in very cold weather for the colony to warm a spot immediately above the cluster so as to melt the snow from the cover, yet at the same time there is ice (frost) on all sides and below them. It is the melting of this frost and ice, and its precipitation upon the cluster, wetting and chilling them, that kills many a colony in winter. This leads me to say here that every colony should have some means of getting rid of this moisture, and the way to do it is either to have the hive top so warm that it will not condense on it, or have it so arranged that the moisture-laden air can pass off. A good, large cluster will usually take care of the heating question if kept *dry*, but they cannot get rid of the accumulations of frost and ice.

Here in Colorado we have a very dry air, and it is a fact that bees will winter successfully in old boxes or hives that are open both top and bottom, with almost unlimited upward ventilation. The whole secret of it is that the free ventilation carries off the moisture, keeping the bees and combs dry; there is no sour, thin honey and no chilled bees. I have both chaff and single-walled hives, and the bees winter fully as well, if not a little better, in the single-walled ones, and breed up as quickly and early in the spring as in the chaff-hives. I have thought that the chaff-hive colonies were slower, and I know they show more wet, moldy combs.

In late spring and early summer when a colony has become strong enough to fill the brood-chamber and keep it warm, I think possibly the chaff is some help by keeping the colony a little more even, and it is a fact that the packed hive will not be troubled with robber-bees so much as the single-walled. To average the quetsion, I would not give a cent more for chaff hives than for single-walled, for this or a similar climate. Really, I am a little skeptical about the value of the chaff hives anywhere, but don't any one discard them or change because of my skepticism regarding them, in moist climates. Do this, however: Try some big hives, and so manage to have some rousing big colonies in these big hives to winter alongside of your little-hive colonies, and compare the wintering and the results after the next honey-flow; but you may have to contract *during the flow*.

Following out some of this reasoning—and it is based on experience—I conclude that there is no better shape for a hive than about 12 inches square, and 20 to 30 inches high, so far as successful wintering, and building-up after the winter is over. The reason is plain: If they start into winter with many bees they live through with a good start of bees in the spring to mature the first brood; and in wintering they have such a good store of honey above them that they have but to follow it up, and eat as they go, and in the spring they are close to the top, and but a small space about them to warm. It makes no difference if there is a bushel of comb beneath the cluster, or if those combs be full of honey—if full of honey they will be opened, and all honey next to the entrance carried up, and this carrying up of honey encourages breeding. The colony will not, and does not, need to warm what is below them.

But there is some reasons why we do not want a hive of the proportions of 12 inches square, no matter how high, and we will go further into the subject in the next article.

Larimer Co., Colo.

(To be continued.)

Growing Alfalfa for Honey in Illinois.

BY J. E. JOHNSON.

AS I consider honey-plants the foundation of successful bee-keeping, I have been investigating and experimenting on the same for some time. This is the plan I have formed for the coming season in regard to alfalfa:

I have an uncle living near Hutchinson, Kans., who has

raised alfalfa successfully for many years without irrigating. He has found that alfalfa is able to resist drouth better than many other crops, and gets three cuttings nearly every year. I also find that alfalfa is raised in many parts of the West, without irrigation. I have also seen one little patch near here which stands the winter well, but does not seem to flourish as it should. Something seems to be lacking, which is no doubt the bacteria spoken of in Bulletin No. 76 of the Illinois Experiment Station. It is on high land, not very rich.

I have talked with my neighbors, many of whom are cattle-raisers, and all agree that alfalfa would be a fine thing here if we could grow it successfully. All seem anxious to try it, and I have agreed to furnish them 1 to 5 pounds of seed each at 25 cents per pound. I shall also try a patch myself. I shall send to my uncle for infected soil from a successful alfalfa field, and furnish some free to my neighbors so as to enable them to get their soil inoculated with the necessary bacteria. If I manage this plan properly, I see no reason why I should not be able, in time, to find myself surrounded by alfalfa fields, as my neighbors are as eager to try the experiment as I am to have them, as it would be a great advantage to stock-raisers. Any one in Illinois, or the Eastern States, could try this matter for himself with but little expense; but he must persevere if he wishes to succeed, as in other enterprises.

I think the reason alfalfa has not been thoroughly tested in the East is because we can raise many other forage crops successfully. This they cannot do in the far West, and therefore they have persevered because of necessity, and have succeeded. No doubt any field of alfalfa would finally develop this same bacteria, or germs, in time, but by inoculating the soil from other fields we can hasten the matter very much. On my own patch I shall sow infected soil, and use either manure or commercial fertilizer.

Now as to the honey: Alfalfa is a species of clover, and very closely related to sweet clover, and I have always found that sweet clover produces honey in dry weather, if not too cool, but will sometimes fail in extreme wet weather, and that is also more or less the nature of all clovers. Alfalfa has roots that penetrate the earth deeper than any other clover; so, judging from other clovers, it ought to produce as well, or better, than in the West.

From both observation and what I can learn by correspondence, I shall follow these directions: Sow on ground well drained, not on low, wet soil. The soil should be clean from weed-seeds, and be made very rich, but avoid any very strawy manure.

If I do not get a good catch the first year I will sow again on the same ground, and furnish seed for neighbors to sow again, if not successful the first time. Even a small amount of infected soil scattered over the patch would no doubt give good results in time, if the ground is made very rich.

Knox Co., Ill.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

UNITING A LAYING-WORKER COLONY WITH A NUCLEUS.

If I understand correctly Mr. Baldwins' way of getting something out of a laying-worker colony, it is simply to unite it with a nucleus. Yes, that plan seems to be calculated to save whatever of value there is to save. On the other side of the balance-sheet is the risk of getting a queen killed; and, in fact, the existence of her little colony is put at stake also. Six trials and success every time is a good showing, surely. Page 699.

NAMES FOR VARIOUS FORMS OF HONEY.

Perhaps it would be nice if we could adopt Mr. Cary's three terms—"section honey," "comb honey," and "extracted honey"—as per page 700, but practically it is not possible. "Comb honey" has been so long used, and so often used, as an alternate term for section honey that if we start in to use it for something else we shall for years have a large share of our hearers and readers misunderstanding us. The term "chunk honey" has the merit that it goes right to the spot, and it is not to be misunderstood; but confessedly it doesn't sound altogether alluring. Those who produce the article are entitled to have a name that doesn't insult their product, if they can discover and introduce such a name. I believe the terms "bulk comb" and "bulk honey" have been used to some extent. Those terms rather convey the idea of large quantity. What's wanted is a term that will fit a pound or a thousand pounds equally well.

SUCCESS WITH ALFALFA DEPENDS ON SOIL.

"It beats the bugs!" Now it's not soil, nor climate, nor irrigation, nor longitude, that forbids the growing of alfalfa in our Central States, but lack of the proper miscroscopic bug in the soil. And you can introduce him by taking a ton of the soil he inhabits and applying it to an acre—and then all will be lovely. And it's not Mark Twain, nor a newspaper columnist, nor your humble servant, that says this, but the Illinois Experimental Station. Page 709.

EXPERIMENTS WITH PEAR-BLIGHT.

False reports of important experiments—

"What turpitude of art
Can fitly barb the dart—"

which is needed to transfix them? Where shall we be if that sort of thing is tolerated and allowed to spread? According to page 709, the facts about pear-tree screened under netting were that there was *less* blight than outside—reported free from blight—but no more pears than outside—reported full burden of fruit. That is, the netting was some defense against blight, either by keeping off insects or otherwise, but also hinders fertilization enough to about even the thing up, so far as fruit is concerned. I do not understand that it was any paid scientist in State or National employ that made the false reports.

"OUR SISTERS."

"Our Bee-Keeping Sisters," eh? Well, they do say that "right smart" of bee-men are bachelors; and I venture the timid conjecture that now and then one has had a—somebody—offer to be a "sister" to him before. Page 713.

STYLES OF QUEENS—AND QUEEN-REARING.

Abbott L. Swinson's paper, page 716, gets in some live ideas. Two styles of shape in laying queens, the beautifully tapering kind, and the less tapering kind. Former the best, but latter often decidedly the largest. I think lack of taper and extra size in a queen are occasionally symptoms of disease. If so, we should not expect diseased queens to be as good as healthy ones; but, apart from this, quite possibly Mr. S. is on track of an interesting and valuable fact.

To remove a queen-larva which swims in a very abundant supply of food and put in a much younger one, is a promising experiment. I feel interested in his experience, that the resulting queen is extra large, but not valuable. A calf two days old is best on the milk of a cow only two days in milk, rather than on the milk of one a month progressed in milking; and something analogous to this may affect the above experiment just a little.

MOVING BEES ON A HAND-SLED.

Fifty miles travel with a hand-sled is what George Hodges had if we accept the text on page 717. Must send him to try for the North Pole. Text doubtless has some mistake in it—200 rods too long for a field, exeept on the plains.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

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done. I gained about the same end in what seems to me a more satisfactory way, with part of my shaken swarms. Instead of giving them empty frames, I gave them combs that had been shaken from other colonies ten days previously, and made no second drive. That gave them the increase of bees gradually and naturally, and I didn't see but it worked just as well as to give empty combs.

7. If you mean you kept the forced swarm on five combs throughout the season, I shouldn't expect good work in supers. Allowing, however, that you had done so, your question is simply one of uniting at the close of the season, and I would unite the two as in any other case.

8. It is quite possible that where bees carry much pollen into the sections there may be less carried into empty sections above than below, but that is a factor I have not had to take into account, not being troubled with pollen in sections.

9. I can see no reason why wax-larvæ shou'd be any worse in plain sections than in others. A teaspoonful of carbon would be enough if confined, but would the case fit close enough? Both eggs and larvæ are killed.

10. I don't know why the difference. Does he get as much as you? Possibly his bees are too lazy either to store or swarm. Possibly there's something about your management that favors swarming, and it is possible that one right on the ground might discover the trouble—possibly not.

11. Something like 10.

12. I see no reason why banking colonies should not be a good thing, although it might be a little hard on the hives.

13. What one is accustomed to doing is likely to seem best; but if only 3 in a minute is your gait we would hardly want to follow in this locality, as we more than double that rate of speed.

So long as you ask questions in so intelligent a manner, your questions will always be welcomed; but don't you think it will be better to have your questions distributed along through the years rather than to wait again till the year 1923, and then send them all in a bunch?

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Lady Warwick College.

The British Bee Journal makes interesting mention of the work of the Countess of Warwick, as follows: "To train educated women in what belongs to the lighter side of agriculture—namely, dairy work, market gardening, poultry farming, bee-keeping and fruit-growing—was the idea of the Countess of Warwick, and was carried out by the founding by her of the Reading Hostel in 1898."

So great was the success of the enterprise that larger accommodations were needed, and for this purpose Studley Castle, Warwickshire, was secured, and last October the change was made, the name being changed from "Reading Hostel" to "Lady Warwick College."

The building finely accommodates 60 students, the grounds contain fruits and flowers, with 400 feet of glass, and the country around seems well suited to bee-keeping. Altogether it is a place where a young woman may be very happy in preparing herself for an independent as well as a useful life, that will allow her much of what is too often denied to the weaker sex—the blessings of the open air. Why could not some woman of wealth, on this side the water, erect for herself a monument of the same kind?

The British Bee Journal says: "There is no doubt that many women would be able to undertake the work taught at the college if they only knew how. Fruit-growing and bee-keeping must go together, and we know women can be successful in these branches, because we have seen some of the best results obtained by them."

Hatching Eggs Over Bees.

DEAR MISS WILSON:—You will excuse my bad writing, as you see I have lost one eye, and don't seem to get a glass for the other one that I can see as I ought. You don't know what an inconvenience it is, and I sincerely hope you never will lose your eyes.

Can any sister, or any one else, give the year and number that had the article in it about hatching eggs over the bees? I was not interested in chickens at that time; I read it, but I don't remember how it was headed, so I fail to find it. I have looked the indexes over of the past three years, but fail to find it, not knowing what the heading was. I remember it told how to prepare the nest and all. Perhaps the sister that was going to try it herself could tell. Of course, she read it, too, or she would not have tried it. There are a number of sisters that I am anxious to hear how they succeeded. I hope they will let us know soon their success.

I will tell, as soon as I get time, about my bees, but I have been so busy taking care of my crops and making a chicken yard and house, and fixing my pigeons' place, that I could not take the time to make a report. And losing my right eye I can not write at night, but I hope to have time before long. MRS. SARAH J. GRIFFITH.

Cumberland Co., N. J., Oct. 26.

It may be well not to expect too much from using bees instead of biddies for hatching chickens. If any of the sisters—or, for that matter, any of the brothers—have tried it, will they kindly report whether it was a success or a failure.

Mild Weather With Good Sleighing.

The American Bee Journal comes to us as a weekly visitor to relieve the monotony of the winter hibernating. I enjoyed that trip to Los Angeles, as told in the Journal. I have tried putting in practice some of the many pointers in the Journal. With what degree of success, next summer will tell better.

I have three new queens—Mrs. York, Mrs. Davis, and Mrs. Doolittle. "Children" all look alike. Shouldn't think the mothers could tell them apart. I can't.

We are having very steady mild winter weather, with beautiful sleighing. MRS. D. W. BROWN.

Erie Co., Pa., Dec. 10.

You say the children all look alike, and seem to think that on that account the mothers can't tell them apart. Perhaps the mothers don't depend at all upon looks, but upon the odor. Do you suppose the mothers have names for all the children?

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.